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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/775,636

02/10/2004

Gordon L. Olsen

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01/21/2005

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EXAMINER

MARTINEZ, JOSEPH P

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,636

Applicant(s)

OLSEN ET AL.

Examiner

Joseph P. Martinez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-12, 15-17, 20 and 23 is/are rejected.
- 7) ☒ Claim(s) 9, 13, 14, 18, 19, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2-10-04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7, 8, 16, 17, 20 and 23 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Yoshikawa et al. (5833340).

Re claims 1, 7, 8, 20 and 23, Yoshikawa et al. teaches for example in fig. 5 and 17, an image display device comprising: a) a case (32) comprising an opening (where viewer 33 is seated); b) a luminous source image display (16a-c) displaying a first image, wherein the source image display is positioned within the case (col. 49-51); and c) a focusing element (1) receiving light from the source image display and focusing the light to form a second image that is viewable through the opening of the case (col. 9, ln. 45-48), wherein the focusing element is positioned within the case (col. 9, ln. 41-42); wherein the focusing element comprises a concave mirror (1) and a mirror supporter (15) that supports the concave mirror, and wherein the perimeter of the concave mirror comprises at least one straight-cut portion or two parallel straight-cut portions (col. 5, ln. 14-17), each of which has a line contact with the mirror supporter (col. 5, ln. 56-58), wherein the image information provided by the image source is changed with user interaction (col. 1, ln. 6-11, wherein the office interprets the concave mirror for use in a video game system to disclose user interaction, as is well known in the art).

Re claim 2, Yoshikawa et al. further teaches for example in fig. 5, the concave mirror is substantially having a shape of a partial spherical surface (col. 4, ln. 29-30, wherein the molded resin is further deposited with reflective material to become a mirror).

Re claim 3, Yoshikawa et al. further teaches for example in fig. 2, the concave mirror is made by vacuum drawing a flat plastic plate into a hemispherical shape (col. 4, ln. 13-33), and cutting the drawn plate into a predetermined shape (col. 5, ln. 14-17).

Re claim 16, Yoshikawa et al. further teaches for example in fig. 17, an image source (30) that provides image information to the source image display, whereby the source image display displays the first image (c).

Re claim 17, Yoshikawa et al. further teaches for example in fig. 19, the image source is a computer (39).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 4, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al. (5833340).

Re claims 4 and 5, Yoshikawa et al. teaches the image display device as disclosed above.

But, Yoshikawa et al. fails to explicitly teach the concave mirror is underdrawn or wherein the concave mirror is underdrawn by about 12%.

However, Yoshikawa et al. teaches for example in fig. 2, vacuum drawing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to underdraw or underdraw by about 12%, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yoshikawa et al. to underdraw the concave mirror in order to provide for optimum reflectance.

Re claim 10, Yoshikawa et al. teaches the image display device as disclosed above.

But, Yoshikawa et al. fails to explicitly teach the mirror supporter can be pivoted whereby the concave mirror can be pivoted.

However, Yoshikawa et al. teaches for example in fig. 4, the concave mirror (11) is supported by the holders (12, 13) of the frame (2) which are fixed to the frame by bolts (14). The office interprets the frame of Yoshikawa et al. to secure the concave mirror, and therefore if the frame is pivoted, the secured concave mirror will pivot with the frame.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yoshikawa et al. to teach the mirror supporter can be pivoted whereby the concave mirror can be pivoted in order to provide proper positioning of the mirror.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al. (5833340) in view of Tichenor et al. (5130856).

Re claim 6, Yoshikawa et al. teaches for example in fig. 17, the concave mirror has a front surface (col. 5, ln. 3-4) and a back surface (col. 5, ln. 10), wherein the front surface directs toward the opening (fig. 17), wherein the back surface is coated (col. 5, ln. 9-13).

But, Yoshikawa fails to explicitly teach is coated with substantially black material.

However, within the same field of endeavor, Tichenor et al. teaches for example, the rear surface is coated with substantially black material (col. 5, ln. 7-9).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yoshikawa et al. with the teachings of Tichenor et al. in order to further enhance the absorption of glare, as taught by Tichenor et al.

3. Claims 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al. (5833340) in view of Jenkins, Jr. (4299446).

Re claim 11, Yoshikawa et al. teaches for example in fig. 5 and 17, the perimeter of the concave mirror comprises two of the parallel straight-cut portions (col. 5, ln. 14-17), wherein the two side panels form line contacts with the two straight-cut portions (col. 5, ln. 56-58).

But, Yoshikawa et al. fails to explicitly teach the mirror supporter comprises two side panels and a back panel that connects the two side panels.

However, within the same field of endeavor, Jenkins, Jr. teaches for example in fig. 4, the mirror supporter (10) comprises two side panels (13 and 14) and a back panel (12) that connects the two side panels.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yoshikawa et al. with the mirror supporter of Jenkins, Jr. in order to provide a frame that retains the reflective element in its desired flexed configuration, as taught by Jenkins, Jr. (col. 3, ln. 26-27).

Re claim 12, Yoshikawa et al. in view of Jenkins, Jr. teach the image display apparatus as disclosed above.

But, Yoshikawa et al. in view of Jenkins, Jr. fails to explicitly teach the each of the side panels comprises a pivot axis around which the mirror supporter can pivot.

However, the office interprets the ability to pivot the frame of either Yoshikawa et al. or Jenkins, Jr. on any axis and therefore teaches the claimed limitation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Yoshikawa et al. in view of Jenkins, Jr. to include pivoting the mirror supporter in order to properly position the mirror.

Re claim 15, Jenkins, Jr. further teaches for example in fig. 4, the wherein the concave mirror (18) has a front surface (surface facing away from back panel 12) and a back surface (opposite of surface facing outward), wherein the front surface directs toward the opening (fig. 4), wherein the back panel (12) of the mirror supporter covers the back surface (fig. 4), wherein

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each of the side panels (13 and 14) comprises a wing (portion that extends perpendicular to back panel 12) that extends opposite the concave mirror, wherein the wing comprises one or more attaching points (22) that attach the mirror supporter to the case (col. 2, ln. 51-54).

Allowable Subject Matter

Claims 9, 13, 14, 18, 19, 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art taken alone or in combination fails to anticipate or fairly suggest the limitations of the claims, in such a manner that a rejection under 35 USC 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in dependent claims 9, 13, 14, 18 and 21.

Specifically regarding claims 9 and 21, Yoshikawa et al. teaches the state of the art of image displays.

But, Yoshikawa et al. fails to explicitly teach flexible strips are provided between the straight-cut portions and the mirror supporter, as claimed.

Specifically regarding claim, Yoshikawa et al. teaches the state of the art of image displays.

But, Yoshikawa et al. fails to explicitly teach one of the side panels further comprises a lock member that blocks pivoting of the mirror supporter, as claimed.

Specifically regarding claim 14, Yoshikawa et al. teaches the state of the art of image displays.

But, Yoshikawa et al. fails to explicitly teach the back panel comprises at least one supporting portion that supports the concave mirror between the side panels, as claimed.

Specifically regarding claim 18, Yoshikawa et al. teaches the state of the art of image displays.

But, Yoshikawa et al. fails to explicitly teach a sensor device that senses a position of a user's hand in a plane at the opening, as claimed.

Conclusion

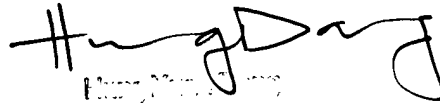
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
1-17-05



Handwritten signature, likely of a patent examiner or official, with a date stamp below it.